

# Highly Pathogenic Avian Influenza (HPAI)

## Depopulation and Disposal for Birds in Your HPAI-Infected Flock

Highly pathogenic avian influenza (HPAI) is a very contagious and deadly disease for poultry. All it takes is one infected bird, and the disease can spread from flock to flock within a matter of days. As with any highly contagious animal disease, a quick and early response is our best chance to limit the size and scope of the outbreak. Depopulating affected animals is a key part of the response: it's one of the most effective ways to stop disease spread and protect U.S. animal health as a whole.

Federal law gives the U.S. Department of Agriculture (USDA) authority to depopulate animals in these situations to stop disease spread. USDA's goal is to complete this work within 24 hours of first detecting HPAI at a property. The sooner we act, the faster we can contain the outbreak and help business return to normal.

Your case manager will walk you through the process as we prepare to depopulate your flock and find out—as best we can—how HPAI may have entered your facility and if it has spread to any neighboring farms. We will also handle the disposal process, working with you to make sure it's done safely, in compliance with all applicable laws, and without spreading HPAI further.

### Depopulation Methods

There are two main methods we use to depopulate HPAI-affected flocks: water-based foam for floor-raised birds and carbon dioxide gas for caged birds. These are the most humane and effective options available in an emergency situation involving mass numbers of birds. Trained personnel will arrive onsite and handle these tasks under the supervision of Federal and State animal health officials.

If our preferred methods don't allow us to depopulate the flock as quickly as needed—within 24 hours—we must consider other options. These may include shutting off the facility's ventilation fans ("ventilation shutdown"). Federal and State officials will carefully evaluate your farm and work with you to figure out the best option for meeting the goal of 24-hour depopulation.

In every case, we take the decision very seriously and weigh many factors when choosing what depopulation method to use. These include, among other things, the size and type of the animals, their behavior, and their containment/housing facilities. We also look at the number of animals in the flock, the location of the farm and environmental conditions there, disease information, and available resources and personnel.

### WHAT IS DEPOPULATION?

There is a difference between "depopulation" and "euthanasia."

**Depopulation** is when large numbers of animals must be destroyed in response to an animal health emergency. With depopulation, the welfare of the animals is given as much consideration as practical, but the situation is understood to be extenuating.

**Euthanasia**, however, involves transitioning an animal to death as painlessly and stress-free as possible.

While euthanasia is preferable to depopulation, it is not always possible during an animal health emergency because of the need to move quickly to slow or stop disease spread.

During an HPAI outbreak, depopulating flocks within 24 hours is crucial. It's the best way to eliminate the disease and, overall, is a more humane approach. A lengthier depopulation process can lead to a greater number of birds suffering the terrible effects of HPAI.

USDA follows the recommendations of the American Veterinary Medical Association and the World Organization for Animal Health whenever possible. We use trained veterinarians, animal health technicians, and specialized contractors to complete depopulation work. Throughout the process, our focus is on keeping personnel safe while minimizing stress to the animals.

## Disposal Options

There are many safe methods for carcass disposal. These include composting, onsite burial, incineration, rendering, and landfilling. Each disposal option can take a different amount of time to complete. When deciding which method to use, we look at several factors, including the size of the flock, space requirements, associated costs, local conditions, and applicable laws.

We also consider the benefits and limits to using each method:

- **Composting.** Contains the virus to the farm and produces a soil amendment/fertilizer product. However, composting requires ample flat space and may not be possible for all farming operations, such as egg layer facilities or other places where space is limited.
- **Burial.** Must be approved by the State environmental regulatory agency and may not be permitted if the water table is close to the ground surface.
- **Incineration.** A safe method for disposing of carcasses, but the fuel requirements are substantial and can be costly.
- **Rendering.** This involves processing carcasses until they are reduced to water, fat or tallow, and meat or bone meal. It is very effective but requires added safety precautions to make sure the virus does not become aerosolized and dispersed throughout the rendering plant. It is also disruptive for the plant's normal operations.
- **Landfilling.** Landfilling allows safe and efficient disposal of large quantities of carcasses. However, individual landfill managers may put restrictions on the type or quantity of materials they accept.

Depending on the situation, we may end up taking a combined approach and use a few or all of these methods.

## For More Information

If you have specific questions, talk with your case manager or call the nearest USDA office ([www.aphis.usda.gov/animal-health/state-offices](http://www.aphis.usda.gov/animal-health/state-offices)).

For general information on HPAI and emergency response, go to [www.usda.gov/avian\\_influenza.html](http://www.usda.gov/avian_influenza.html) and [www.aphis.usda.gov/fadprep](http://www.aphis.usda.gov/fadprep). Here, you can also download USDA's "Ventilation Shutdown Evidence & Policy," which gives more technical details about this topic.

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### ACTIONS YOU NEED TO TAKE

- Talk with your case manager about how you'll be involved and if you'll work directly with emergency responders on these activities.
- Wear personal protective equipment if you are on the farm at the time depopulation or disposal work is happening or if you are directly involved in this work.
- Require that your employees also wear personal protective equipment if they are on the farm or helping with response activities. Your case manager can provide guidance on personal protective equipment if needed.
- Adhere to strict biosecurity procedures at your farm.
- Follow all other steps outlined by the response team to minimize risk of spreading the disease during the process.

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